AMENDMENTS TO THE CLAIMS

Applicant submits below a complete listing of the current claims, including marked-up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing. This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (Previously presented) A method for transmitting, between a monitoring circuit integrated with a microprocessor and an analysis tool, digital messages each comprising at least one data packet, the method comprising:

a/ for each message of the digital messages, dividing each data packet of a digital message into successive segments of same predetermined size, each segment of the successive segments being classified according to at least one of the five following types of segment:

- segment containing a message start;
- segment containing intermediary data;
- segment containing a packet end;
- segment containing a message end; or
- empty segment;

b/ sending at the same time as each segment of the successive segments, an identification signal characterizing the type difference between the considered segment and the previous segment; and

c/ reconstituting the packets of the digital message by arranging end to end the successive segments containing data of a same packet;

wherein a segment of the successive segments representing the start and the end of the digital message is classified as a message end, and a segment of the successive segments representing the start of the digital message and the end of a first packet of the digital message is classified as a packet end.

2. (Previously presented) The method of claim 1, comprising:

transmitting a segment containing a message start or an empty segment after a segment containing a message end or an empty segment;

transmitting a segment containing intermediary data after a segment containing a message start or intermediary data or a packet end; and

transmitting a segment containing a packet end or a message end after a segment of any type.

3. (Previously presented) The method of claim 2, comprising assigning the identification signal:

a first value if the transmitted segment contains a message start or intermediary data;

a second value if the transmitted segment contains a packet end;

a third value if the transmitted segment contains a message end and if the previous segment contained a message end or was an empty segment; and

a fourth value if the transmitted segment is empty, or if the transmitted segment contains a message end and if the previous digital message contained a message start, intermediary data, or a packet end.

4. (Previously presented) A device for transmitting, between a monitoring circuit integrated to a microprocessor and an analysis tool, digital messages, each digital message comprises at least one data packet, the device comprising:

means for dividing each data packet of a digital message into successive segments of same predetermined size, each segment of the successive segments being classified according to at least one of the five following segment types:

- segment containing a message start;
- segment containing intermediary data;
- segment containing a packet end;
- segment containing a message end; or
- empty segment;

means for sending at the same time as each segment of the successive segments, an identification signal characterizing the type difference between the considered segment and the previous segment; and

means for reconstituting the packets of the digital message by arranging end to end the successive segments containing data of a same packet;

wherein the means for dividing each data packet classifies a segment of the successive segments representing the start and classifies a segment of the successive segments representing the start of the digital message and the end of a first packet of the digital message as being a packet end.

5. Canceled

6. (Previously presented) The device of claim 4, wherein the identification signal has:

a first value if the transmitted segment contains a message start or intermediary data;

a second value if the transmitted segment contains a packet end;

a third value if the transmitted segment contains a message end and if a prior segment contained a message end or was an empty segment; and

a fourth value if the transmitted segment is empty, or if the forth segment contains a message end and if a second prior message contained a message start, intermediary data, or a packet end.

7. (Previously presented) The device of claim 4, wherein unused most significant bits of a last segment are assigned a predetermined value.

8. (Previously presented) The method of claim 1, further comprising assigning a predetermined value to unused most significant bits of a last segment.

9. (Currently Amended) A method for transmitting, between a monitoring circuit integrated with a microprocessor and an analysis tool, at least one digital message comprising at least one data packet, comprising:

dividing the at least one data packet into a plurality of segments comprising at least a first segment and a second segment, each of the plurality of segments being of a predetermined size and being classified according to at least one of the five following types of segment:

- segment containing a message start;
- segment containing intermediary data;
- segment containing a packet end;

- segment containing a message end; or

- empty segment; and

sending from the integrated circuit to the monitoring tool in sequence the first segment and the second segment,

wherein the first segment is classified as either an empty segment or a message end and the second segment is classified as ~~either~~ a packet end ~~or a message end~~.

10. (Previously presented) The method of claim 9, wherein the first segment is classified as a message end and the second segment is classified as a message end.

11. (Previously presented) The method of claim 9, wherein the first segment is classified as an empty segment and the second segment is classified as a packet end.

12. (Previously presented) The method of claim 9, wherein the first segment is classified as a message end and the second segment is classified as a packet end.

13. (Previously presented) The method of claim 9, wherein the first segment is classified as an empty segment and the second segment is classified as a message end.

14. (Previously presented) The method of claim 9, further comprising sending from the integrated circuit to the monitoring tool a third segment of the plurality of segments, wherein the third segment is classified as message start.

15. (Previously presented) The method of claim 14, further comprising sending from the integrated circuit to the monitoring tool a fourth segment of the plurality of segments, wherein the fourth segment is classified as intermediary data.

16. (Previously presented) The method of claim 10, further comprising sending from the integrated circuit to the monitoring tool a third segment of the plurality of segments, wherein the third segment is classified as message start.

17. (Previously presented) The method of claim 16, further comprising sending from the integrated circuit to the monitoring tool a fourth segment of the plurality of segments, wherein the fourth segment is classified as intermediary data.

18. (Previously presented) The method of claim 11, further comprising sending from the integrated circuit to the monitoring tool a third segment of the plurality of segments, wherein the third segment is classified as message start.

19. (Previously presented) The method of claim 18, further comprising sending from the integrated circuit to the monitoring tool a fourth segment of the plurality of segments, wherein the fourth segment is classified as intermediary data.

20. (Previously presented) The method of claim 12, further comprising sending from the integrated circuit to the monitoring tool a third segment of the plurality of segments, wherein the third segment is classified as message start.